



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/340,172	06/25/1999	DEREK CHI-LAN WON		3571

7590 03/26/2004  
DEREK WONG  
1341 ECHO VALLEY DR  
SAN JOSE, CA 951205623

EXAMINER

COLEMAN, ERIC

ART UNIT	PAPER NUMBER
----------	--------------

2183

DATE MAILED: 03/26/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/340,172

Applicant(s)

WON, DEREK CHI-LAN

Examiner

Eric Coleman

Art Unit

2183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 44-85 and 87 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 44-77, 81, 82 and 87 is/are allowed.
- 6) ☒ Claim(s) 78-80 and 83-85 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date No. 10.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Prosecution of the instant application is hereby reopened with this action on the merits. New prior art that reads on the claims has been discovered and therefore this application is reopened to present the rejections that follow.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claim 78 is rejected under 35 U.S.C. 102(e) as being anticipated by Grochowski (patent No. 6,367,004).

5. Grochowski taught the invention as claimed including a data processing ("DP") system comprising: a processor device comprising a predicate history table to record the history of previous executions of predicate calculation instructions whereby run-time

behavior about predicates can be recorded in order to help optimize subsequent instruction scheduling (e.g., see figs. 1,2,3,4,5 and col. 5, line 18-col. 8, line 44).

6. Claim 79 is rejected under 35 U.S.C. 102(e) as being anticipated by McFarling (patent No. 5,758,142).

7. McFarling taught the invention as claimed including a data processing ("DP") system comprising: a processor device comprising: a data cache (e.g., see fig. 7), and a data hit/miss history table to record the history of whether previous executions of memory access instructions were hits or misses in the data cache whereby run-time behavior about hit/miss can be recorded in order to help optimize subsequent instruction scheduling (e.g., see col. 9, lines 23-65).

8. Claim 83 is rejected under 35 U.S.C. 102(e) as being anticipated by Zaidi (patent No. 6,016,540).

9. Zaidi taught the invention as claimed including a data processing ("DP") system comprising: a software method of performing code scheduling comprising the step of building a dependency matrix (36) to respond potential dependencies between instructions, whereby the dependency matrix provides dependency information in an efficiency accessed manner for the software method to perform the code scheduling (e.g., see figs. 2,3 and col. 2, line 20-60, and col. 6, line 17).

10. Claims 85,84 are rejected under 35 U.S.C. 102(e) as being anticipated by Liu (patent No. 5,978,900).

11. Liu taught the invention as claimed including a data processing ("DP") system comprising: A processor device comprising means for executing instructions for an

instruction set architecture wherein the instruction set architecture can explicitly note dependencies between instructions by using dependency vectors (e.g., see figs. 3,4,5,6,7 and col. 2, lines 22-48 and col. 5, lines 4-41).

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

13. Claim 80 is rejected under 35 U.S.C. 102(a) as being anticipated by Kenner (patent No. 5,903,749).

14. Kenner taught the invention as claimed including a data processing ("DP") system comprising: a processor device comprising an ambiguous memory conflict history table (390)(e.g., see fig.3) to record the history or whether previous executions of promoted ambiguous read instructions cause memory conflicts or not, whereby run-time behavior memory conflicts can be recorded in order to help optimize instruction scheduling (e.g., see col. 7, line 46-col. 8, line 30, and col. 10, line 57-col. 12, line 60).

### ***Allowable Subject Matter***

15. Claims 44-77,81,82, and 87 are allowed.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Coleman whose telephone number is (703) 305-9674. The examiner can normally be reached on Monday-Thursday.

Art Unit: 2183

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan can be reached on (703) 305-9712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EC

  
**ERIC COLEMAN**  
**PRIMARY EXAMINER**

March 19, 2004